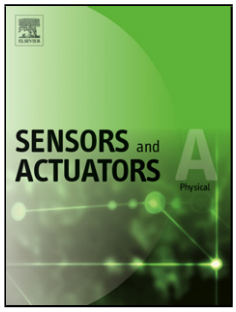

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Improvements in electrical properties, low frequency noise and detection performance of a Mn-based bilayer thin film infrared detector

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Highlights

- This paper shows the fabrication and structural properties of three Mn-based thin film detectors.
- The improvements in electrical, noise properties of the bilayer structured film and traditional MCN films were investigated.
- The comparability of the MCN-MCCN detector with that of the traditional one was investigated.

ABSTRACT

Experimental studies about low frequency 1/f noise and detection performance of Mn-based monolayer and bilayer structured detectors produced by Radio Frequency (RF) sputtering method have been carried out. $Mn_{1.56}Co_{0.96}Ni_{0.48}O_4$ (MCN) thick film (10 μm) was deposited on sapphire substrate to produce infrared detector by using